Docket 82391AJA
Customer No. 01333

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE
BEFORE THE BOARD OF PATENT APPEALS AND INTERFERENCES

In re Application of

Ronald S. Cok

A DYNAMIC CONTROLLER FOR ACTIVE-MATRIX DISPLAYS

Serial No. 09/817,547

Filed 26 March 2001

Group Art Unit: 2675

Examiner: Chanh Duy Nguyen

I hereby certify that this correspondence was sent by facsimile transmission to the United States Patent and Trademark Office on the date set forth below.

Valerie J. Richardson

Valerie J. Richardson

December 19, 2005

Date

Mail Stop APPEAL BRIEF-PATENTS
Commissioner for Patents
P.O. Box 1450
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Sir:

REPLY BRIEF PURSUANT TO 37 C.F.R. 41.41

In reply to the "Response to Arguments" section of the Examiner's Answer mailed October 19, 2005, the following additional arguments are presented.

Arguments

In response to Appellant's argument that Shen does not combine a feedback signal from the display with a corrected output signal to form a new signal, as there is no feedback loop based on actual display light emissions which enables compensating for actual changes in the display performance over time, the Examiner presents his point of view that Applicant does not take into consideration column 8, lines 64-68 of Shen. Such teaching in Shen, however, is specifically addressed in the second paragraph on page 5 of Appellant's Brief, where it is explained that such section relates to the use of CCD cameras for initial calibration or recalibration of the pixels of a display device, not with respect to use in a dynamic controller in accordance with the present invention. This initial calibration or recalibration is a conventional procedure employed in display devices to establish uniformity of light output between different pixels, and does not relate to the methods for automatic

compensation of efficiency loss of pixels over time, and there is no teaching or suggestion in Shen that such actual light emission calibration measurements should be performed as part of the automatic compensation methods otherwise discussed in Shen. Thus, the Examiner's continued reference to such section of Shen, without any explanation as to how it relates to obviousness of the present claimed invention, clearly does not establish a prima facie case of obviousness.

The Examiner's reference to Fig. 9 and column 7, lines 47-48 is further deficient with respect to establishing a prima facie case of obviousness. Contrary to the Examiner's assertions at page 9, lines 2+ of the Answer, e.g., Fig. 9 does not appear show any signal "V(n)(I(n)" from display (93). Rather, Fig. 9 only appears to show a signal $V_N(I)$ which is supplied from mux/DAC 92 to voltage sensing circuitry 94 and Display 93. The Examiner's reference again to column 8, lines 64-68 to support such teaching is, at best, irrelevant, as such reference relates to display pixel calibration as discussed above, rather than automatic pixel compensation to correct for subsequent loss in efficiencies. There simply is no teaching in Shen of a dynamic controller employing a feedback loop based on actual display light emissions which enables compensating for actual changes in the display performance over time.

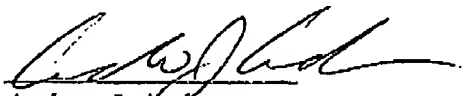
The Examiner argues at page 9, second paragraph, of the Answer that if there is no combination with a feedback signal in Shen as Appellant argues, then there would be no need for the equations involving I_0, In, and In+1 in the calculation steps of Shen. While it appears that such parameters are employed to enable calculation of the accumulated current that has been passed through the device (see, e.g., Abstract), this argument is in any event again deficient with respect to establishing a prima facie case of obviousness, as regardless of how such parameters may be employed by Shen, there is no teaching of a dynamic controller employing a feedback loop based on actual display light emissions which enables compensating for actual changes in the display performance over time. As set forth in Shen, the correction methods taught therein rather rely on pre-programmed models of decay efficiency (see, e.g., col. 5, lines 48-53, and col. 8, lines 5-8), and continuous monitoring of the priory history of each pixel.

In summary, the Examiner appears to be continuing to misunderstand the asserted teachings of both Shen and Salam with respect to the present claimed invention. While each asserted reference may include dynamic controller

embodiments for correcting output of pixel elements due to degradation (losses of efficiency) over time, the only embodiments taught for such correction relate to monitoring of cumulative pixel use in combination with voltage and current measurements in relation to expected performance over the lifetime of the pixel elements, as opposed to use of a dynamic controller employing feedback based on actual pixel light emission performance. Where actual pixel light emission performance is measured in such references, it is as part of an overall pixel initial calibration or recalibration step performed to provide uniformity of light emission across the display. These are distinct processes, as degradation correction entails comparison of the performance of the same elements over time, while uniformity calibration entails comparison of the performance of different elements at the same time. As neither Shen nor Salam teaches measuring actual light emission performance over time and employing such measurement in the form of a feedback loop for degradation correction, such references cannot establish a prima facie case of obviousness with respect to the present invention.

For the above reasons, in combination with those set forth in the Brief mailed July 26, 2005, Appellants respectfully request that the Board of Patent Appeals and Interferences reverse the rejection by the Examiner and mandate the allowance of Claims 1-19.

Respectfully submitted,



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If the Examiner is unable to reach the Applicant(s) Attorney at the telephone number provided, the Examiner is requested to communicate with Eastman Kodak Company Patent Operations at (585) 477-4656.